

## ENVIRONMENTAL PROTECTION AGENCY

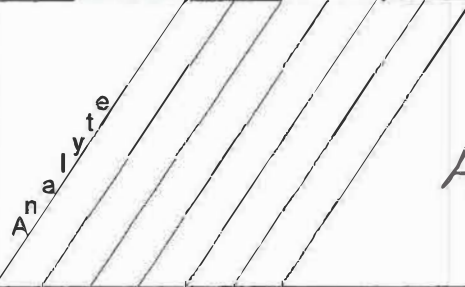
Office of Enforcement

## CHAIN OF CUSTODY RECORD

REGION 5

77 West Jackson Boulevard

Chicago, Illinois 60604

PROJ. NO. 02AH66		PROJECT NAME Cheshire Monitoring studt				NO. OF CON- TAINERS	<div style="text-align: center;">  </div>										Activity Code: 12345	
SAMPLERS: (Print Name and Sign) Mike Murphy <i>Mike Murphy</i>																	TAG NUMBERS	
STA. NO.	DATE	TIME	COMP	GRAB	STATION LOCATION													
DO1	8/30	00:00	X		GHS	1										5-340290 1 to 1		
SO1	8/30	00:00	X		GHS	1										5-340289 1 to 1		
																GHS # 3012, Pstg Avg = 20.3		
																GHS # 3013, Pstg Avg = 20.9		
																No Filters for River Valley or Addenville		
Relinquished by: (Signature) <i>M.J. Murphy</i>			Date / Time 8-30-02 0936		Received by: (Signature) <i>William Aug 5</i>				Ship To:									
Relinquished by: (Signature)			Date / Time		Received by: (Signature)				ATTN:									
Relinquished by: (Signature)			Date / Time		Received for Laboratory by: (Signature) <i>William Aug 5</i>		Date / Time 9/30/02 11:52am		Airbill Number LIPS # 12 401194 01 4087 8706									
											Chain of Custody Seal Numbers							

5-140072

Project No. 02AH66 Project Name AIR 0209 076 CHESHIRE MONITORING STUDY 90102A  
ARRIVAL DATE: 9/30/2002 DEB DATE: 10/22/2002

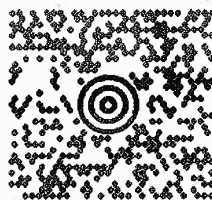
Sampler Mike Murphy						
Cooler ID 1		Page 5-140072				
Sample Id:	Station	Date / Time	Grab / Comp	Station Location	No Bottles	Tag Numbers
02AH66DO1	DO1	30/08/2002 00:00:00	<input type="radio"/> Grab <input checked="" type="radio"/> Com	GHS	1	5-340290 1 to 1

Bottle No. 1		Parameter PM10				
Sample Id:	Station	Date / Time	Grab / Comp	Station Location	No Bottles	Tag Numbers
02AH66SO1	SO1	30/08/2002 00:00:00	<input type="radio"/> Grab <input checked="" type="radio"/> Com	GHS	1	5-340289 1 to 1

Bottle No. 1		Parameter PM10				
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FROM:  
SOUTHEAST DISTRICT OFFICE  
(740) 385-8501  
OHIO EPA  
2195 E. FRONT STREET  
LOGAN OH 43138-8637

2 LBS 1 OF 1



IL 606 9-08



SHIP TO:

WILLIAM SARGENT JR.  
USEPA CENTRAL REGIONAL LABORATORY  
10 FLOOR  
536 SOUTH CLARK STREET  
CHICAGO IL 60605

U.S. FEDERAL PROTECTIVE SERVICE

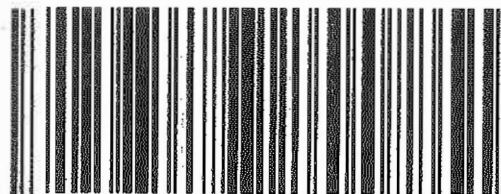
SEP 27 2002

Officer's Initials  
536 S. Clark St.

UPS NEXT DAY AIR

TRACKING #: 1Z 401 199 01 4087 8706

1



BILLING: P/P

UOW 41.16 Konica F 19.0A 07/2002

**CENTRAL REGIONAL LABORATORY**  
Data Checklist

Data Set AIR 0209016 Cheshire Monitoring Study  
PM10

☒ Chain of Custody

☒ Reported in LIMS

☒ Transmittal Report w/signatures of the following:

- Analyst(s)
- Environmental Data Coordinator

Prepared by: Sylvia Griffin 10-22-02  
Environmental Data Coordinator

Revised 11-04-02



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY



REGION 5 CENTRAL REGIONAL LABORATORY

536 SOUTH CLARK STREET

CHICAGO, ILLINOIS 60605

Date: OCT 22 2002

Subject: Review of Region 5 Data for **CHESHIRE MONITORING STUDY**

From: Francis A. Awanya, Chemist ~~FAA~~  
Region 5 Central Regional Laboratory

To:

AIR  
0209016

Attached are the results for: **CHESHIRE MONITORING STUDY**

CRL data set number: **0209016**

Samples analyzed for: **Suspended Particles**

Results are reported for sample designations: **2002AH66D01 and 2002AH66S01.**

OCT 22 2002

Data Management Coordinator and Date Received

Date Transmitted: OCT 22 2002  
/ /

Please have the U.S. EPA Project Manager/Officer complete the Customer Satisfaction Survey, attached, or call the CRL Sample Coordinator at 3-1226.

Please sign and date this form below and return it with any comments to:

Sylvia Griffin  
Data Management Coordinator  
Region 5 Central Regional Laboratory  
ML-10C

/ /  
Received by and Date

Comments:

Rev. 7/23/01

## CRL Data Review Qualification Codes

QUALIFIER	DESCRIPTION
<b>B</b>	This flag is used when the analyte is found in the associated <u>B</u> lank as well as the sample. It indicates possible blank contamination and warns the user to take appropriate action while assessing the data. See the case narrative for a discussion of common lab contaminants and/or the relative concentration of contamination in the samples and blanks for relevance.
<b>J</b>	This flag is used when the analyte is <u>estimated</u> due to quality control limit(s) being exceeded. This flag accompanies all GC/MS tentatively identified compounds (TICs). This flag also applies to a suspected, unidentified interference. This flag is placed on affected detected results as well as non-detected (i.e., "U" flagged) results. ( <u>J</u> is the flag used in the Superfund CLP SOW and Data Review Functional Guidelines and is used by CRL for consistency.)
<b>M</b>	This flag is used when the analyte is confirmed to be qualitatively present in the sample, extract or digestate, with a quantity at or above the CRL <u>M</u> ethod Detection Limit (MDL) but below the lowest concentration of the calibration curve. This flag indicates the quantitated value is <u>estimated</u> since it falls below the lowest calibration standard in the calibration curve.
<b>N</b>	This flag applies to GC/MS Te <u>N</u> tatively Identified Compounds (TICs) that have a mass spectral library match.
<b>Q</b>	This flag applies to analyte data that are severely estimated due to quality control and/or <u>Q</u> uantitation problems, but are confirmed to be qualitatively present in the sample. <u>No value is reported with this qualification flag.</u>
<b>R</b>	This flag applies to analyte data that are <u>R</u> ejected and unusable due to severe quality control, quantitation and/or qualitative identification problems. No other qualification flags are reported for this analyte. <u>No value is reported with this qualification flag.</u>
<b>U</b>	This flag is used when the analyte was analyzed for but <u>U</u> ndetected in the sample. The CRL RL for the analyte accompanies this flag. When the customer requests CRL to report below our RL down to our MDL, undetected analytes are reported with a "U" code and the MDL. As with sample results that are positive, the value is corrected for dry weight, dilution and/or sample weight or volume.

03/07/01



Environmental Protection Agency Region 5  
**Central Regional Laboratory**

536 South Clark Street, Chicago, IL 60605  
Phone:(312)353-8370 Fax:(312)886-2591

**WORK ORDER**

Printed: 10/17/02 12:08:14PM

**0209016**

**US EPA Region 5 Central Regional Laboratory**

**Client:** Air Division, US EPA Region 5  
**Project:** Gavin, Cheshire. Ohio

**Project Manager:** Marilyn Jupp  
**Project Number:** [none]

**Report To:**

Kathy Triantafillou  
Air Division, US EPA Region 5

77 West Jackson Boulevard  
Chicago, IL 60605

Phone: (312) 353-4775  
Fax: (312) 353-2001

**Date Due:** Oct-22-02 15:00 (21 day TAT)

**Received By:** William Sargent

**Date Received:** Sep-30-02 11:52

**Logged In By:** William Sargent

**Date Logged In:** Sep-30-02 12:08

Samples Received at:	°C	Starts 8-3-01
All containers intact:	No	Ends 8-3-02
Sample labels/COC agree:	No	
Samples Preserved Properly:	No	
Custody Seals Present:	No	

Analysis	Due	TAT	Expires	Comments
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**0209016-01 2002AH66D01-GHS#3012,PSTG AVG=20.3 [Air Filter] Sampled**  
**Aug-30-02 00:00 Central**

PM10	Oct-22-02 12:00	21	Aug-30-03 00:00
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**0209016-02 2002AH66S01-GHS#3012,PSTG AVG=20.9 [Air Filter] Sampled**  
**Aug-30-02 00:00 Central**

PM10	Oct-22-02 12:00	21	Aug-30-03 00:00
------	-----------------	----	-----------------

<b>Data Set Number:</b>	<u>0209016</u>	<b>Parameter:</b>	<u>Suspended Particles</u>
<b>Facility Name:</b>	<u>CHESHIRE MONITORING STUDY</u>		
<b>Study Name:</b>	<u>CHESHIRE MONITORING STUDY</u>		
<b>Date of Narrative:</b>	<u>10/18/2002</u>	<b>Analyst:</b>	<u>FAA</u>
<b>Prepared by:</b>	<u>FAA</u>	<b>Signature:</b>	<u>FAA</u>

### ANALYSIS CASE NARRATIVE

Two (2) exposed filters were received for suspended particle analysis at the Central Regional Laboratory (CRL) on September 30, 2002. Those filters were fractions of clean filters, prepared at the CRL and sent to the field for exposure. Filter identification numbers and other pertinent information obtained from the individual filters and packaging envelopes are presented in the table below.

Filters ID	Samples ID	Tag Number
Q6597491	2002AH66D01	5-340290-1
Q6597494	2002AH66S01	5-340289-1

Filter equilibrations and final weighting of exposed filters were performed according to CRL.SOP AIG047. Analysis of exposed filters began on 10/15/2002 and was completed on 10/17/2002. All exposed filters were in good conditions.

### QUALITY CONTROL (QC):

Analysis results were evaluated using the QC requirements of CRL.SOP AIG047. All the required quality control criteria for the laboratory, method, and system performance audits were evaluated and determined to be within the limits.

### SAMPLE RESULTS:

All the sample results are acceptable for use.

### ELECTRONIC DATA:

No electronic data.

ENVIRONMENTAL PROTECTION AGENCY  
REGION V  
CENTRAL REGIONAL LABORATORY  
FINAL RESULT REPORT FOR THE TEAM: ANALYTICAL AND INORGANIC (A&I)

DIVISION/BRANCH: AIR DIVISION SAMPLING DATE: 08/30/2002 LAB ARRIVAL DATE: 09/30/2002 DUE DATE: 10/22/2002  
DU NUMBER: 90101A WORK ORDER NUMBER: 0209016 STUDY: CHESHIRE MONITORING STUDY PRIORITY: 1 LABORATORY :CRL

SAMPLE #	CRL LOG NUMBER	SAMPLE DESCRIPTION	SUSPENDE PARTICLE (g/filter)			
1	2002AH66D01	GUIDING HANDS SCHOOL	0.0148			
2	2002AH66S01	GUIDING HANDS SCHOOL	0.0377			
DATE OF ANALYSIS			10/15-17/2002			
ANALYST			FAA			

Reviewed by: AA Date: 10/21/2002

CRL SOP: HK015	Date: 07 January 2000	Revision No: 1
Data review for the Analytical and Inorganic Group		Page ___ of ___

**ATTACHMENT II**

**CRL Analytical and Inorganics Data Review Checklist**

Batch Number: 0209016 Facility: CHESHIRE MONITORING STUDIES  
 Parameter: SUSPENDED PARTICLES CRL.SOP: A1G047

Package Overview:	YES	NO
Raw Data Package Complete?	✓	
Results Reported Correctly?	✓	
Special Requests Done?	N/A	
Calculations Checked?	✓	
Calibration Not Exceeded?	N/A	
Manual Peak Integration performed? Circle one IC or GC and Check	N/A	
Field QC Checked?	N/A	
<b>Quality Control:</b>		
Holding Times Met?	✓	
Preservation Checked?	N/A	
Proper Digestion Verified?	N/A	
Initial Instrument Performance Checks Verified?	✓	
Calibration Verification Checked?	N/A	
Sample-Specific QC (Internal Standards or Analytical Spikes) Okay?	N/A	
Matrix QC Checked?	N/A	
Digestion Blanks Checked?	N/A	
Spiked Blank Checked?	N/A	
LCS (if applicable) Checked?	N/A	
QCS (if applicable) Checked?	N/A	
<b>Final Check</b>		
Technical Review Done?	✓	
Narrative Complete?	✓	

Analyst: FAA Peer Reviewer: AT  
 Date: 10/18/02 Date: 10/21/2002

Comments Attached? (Y/N) N

<b>Data Set Number:</b>	<u>0209016</u>	<b>Parameter:</b>	<u>Suspended Particles</u>
<b>Facility Name:</b>	<u>CHESHIRE MONITORING STUDY</u>		
<b>Study Name:</b>	<u>CHESHIRE MONITORING STUDY</u>		
<b>Date of Narrative:</b>	<u>10/18/2002</u>	<b>Analyst:</b>	<u>FAA</u>
<b>Prepared by:</b>	<u>FAA</u>	<b>Signature:</b>	<u>FAA</u>

### ANALYSIS CASE NARRATIVE

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#### QUALITY CONTROL (QC):

Analysis results were evaluated using the QC requirements of CRL.SOP AIG047. All the required quality control criteria for the laboratory, method, and system performance audits were evaluated and determined to be within the limits.

#### SAMPLE RESULTS:

All the sample results are acceptable for use.

#### ELECTRONIC DATA:

No electronic data.



# CHESHIRE AIR MONITORING PROJECT

## PM10

Parameter: Suspended Particles

Work Ordert Numbers:

0208008, 0209001, 0209002, 0209015, 0209015, 0209016, 0209017, 0209018, 0210005

Date of Analysis 8/16/2002

Analyst: FAA

### BALANCE VERIFICATION:

Standard Weights	Balanced weight	Differences
Actual (g)	Balanced (g)	(g)
Limit +/-0.0005 g		
1.0000	1.0000	0.0000
2.0000	2.0000	0.0000
5.0000	4.9998	0.0002

### QC-SUMMARY FOR EXPOSED FILTERS

Filter ID	CRL Sample	Sampling	ANALYST	Exposed
Number	I.D Number	Date		weight (g)
Q6597484	2002AH64S01	08/18/02	Analyst 1	4.4425
Q6597484	2002AH64S01	08/18/02	Analyst 2	4.4430
Differences (Limit +/- 5 mg).....				-0.0005
Q6597471	2002AH65S02	08/24/02	Analyst 1	4.4799
Q6597471	2002AH65S02	08/24/02	Analyst 2	4.4800
Differences (Limit +/- 5 mg).....				-0.0001

**CHESHIRE AIR MONITORING PROJECT  
PM10**

Filter ID Number	CRL Sample I.D Number	Sampling Date	Station Location	Sampler SN	Pstg Avg	P1/Pa	Total Volume (M^3)	Pre Weight of filters (g)	Exposed weight (g)	Weight Gain	PM10 (UG/M^3)
<b>Work Order Number 0208008</b>											
Q8609567	2002AH62D01	08/06/02	Guiding Hands School	3012	16.10		0.00	4.3699	4.4610	0.0911	ERR
Q8609568	2002AH62S01	08/06/02	Guiding Hands School	3013	16.30		0.00	4.3413	4.4385	0.0972	ERR
Q6597482	2002AH62S02	08/06/02	RVHS	-	20.00		0.00	4.4009	4.4795	0.0786	ERR
Q6597481	2002AH62S03	08/06/02	Addaville	-	20.50		0.00	4.4009	4.4221	0.0212	ERR
<b>Work Order Number 0209001</b>											
Q6597480	2002AH63D01	08/12/02	Guiding Hands School	3013	20.45		0.00	4.4166	4.4776	0.0610	ERR
Q6597479	2002AH63S01	08/12/02	Guiding Hands School	3012	20.90		0.00	4.4190	4.4659	0.0469	ERR
Q6597493	2002AH63S02	08/12/02	RVHS	-	21.10		0.00	4.4035	4.4594	0.0559	ERR
Q6597489	2002AH63S03	08/12/02	Addaville	-	20.80		0.00	4.4134	4.4632	0.0498	ERR
<b>Work Order Number 0209002</b>											
Q6597488	2002AH64D01	08/18/02	Guiding Hands School	3013	20.95		0.00	4.4444	4.4624	0.0180	ERR
Q6597484	2002AH64S01	08/18/02	Guiding Hands School	3012	20.85		0.00	4.4140	4.4425	0.0285	ERR
Q6597486	2002AH64S02	08/18/02	RVHS	-	21.05		0.00	4.3839	4.3995	0.0156	ERR
Q6597487	2002AH64S03	08/18/02	Addaville	-	18.85		0.00	4.4050	4.4266	0.0216	ERR
<b>Work Order Number 0209015</b>											
Q6597485	2002AH65D01	08/24/02	Guiding Hands School	3012	20.20		0.00	4.4080	4.4662	0.0582	ERR
Q6597490	2002AH65S01	08/24/02	Guiding Hands School	3013	20.05		0.00	4.3813	4.4362	0.0549	ERR
Q6597492	2002AH65S02	08/24/02	RVHS	-	20.10		0.00	4.4290	4.4850	0.0560	ERR
Q6597471	2002AH65S03	08/24/02	Addaville	-	20.50		0.00	4.4502	4.4799	0.0297	ERR
<b>Work Order Number 0209016</b>											
Q6597491	2002AH66D01	08/30/02	Guiding Hands School	3012	20.30		0.00	4.4264	4.4412	0.0148	ERR
Q6597494	2002AH66S01	08/30/02	Guiding Hands School	3013	20.90		0.00	4.4152	4.4529	0.0377	ERR
<b>Work Order Number 0209017</b>											
Q6597467	2002AH67D01	09/05/02	Guiding Hands School	3012	21.35		0.00	4.4111	4.4445	0.0334	ERR
Q6597466	2002AH67S01	09/05/02	Guiding Hands School	3013	20.75		0.00	4.4130	4.4383	0.0253	ERR
Q6597464	2002AH67S02	09/05/02	RVHS	-	21.15		0.00	4.4320	4.4724	0.0404	ERR
Q6597465	2002AH67S03	09/05/02	Addaville	-	21.10		0.00	4.4245	4.4566	0.0321	ERR
<b>Work Order Number 0209018</b>											
Q6597446	2002AH70S01	09/23/02	Guiding Hands School	3012	21.05		0.00	4.4275	4.4432	0.0157	ERR
Q6597460	2002AH70S03	09/23/02	Addaville	-	20.40		0.00	4.4310	4.4545	0.0235	ERR
<b>Work Order Number 0210005</b>											
Q6597455	2002AH71D01	09/29/02	Guiding Hands School	3012	21.35		0.00	4.4549	4.4918	0.0369	ERR
Q6597454	2002AH71S01	09/29/02	Guiding Hands School	3013	20.50		0.00	4.4837	4.5210	0.0373	ERR
Q6597457	2002AH71S02	09/29/02	RVHS	-	20.55		0.00	4.4527	4.4868	0.0341	ERR
Q6597456	2002AH71S03	09/29/02	Addaville	-	20.35		0.00	4.4566	4.4889	0.0323	ERR



ITS	Filter ID.	TARE wt (g)	DUP wt (g)	Exposed wt (g)	Exposed wt Dup (g)	Comments
	06597495	4.4440				
	<del>06597468</del>	<del>4.4357</del>				
	06597469	4.4357		4.4869		
sent	06597470	4.4143		4.4664	4.4664 <sup>no</sup>	
	06597471	4.4502	4.4506	4.4799	4.4800 <sup>no</sup>	
	06597472	4.4558		4.5082		
	06597473	4.4380		4.4731		
	06597474	4.4511		4.4803		
	06597475	4.4035	4.4040	4.4594		
	06597476	4.4355		4.4760		
	06597477	4.4380		4.4822		
	06597478	4.4059		4.4435		
	06597479	4.4190		4.4659		
	06597480	4.4166		4.4776		
	06597481	4.4009		4.4221		
	06597482	4.4009		4.4795		
	06597483	4.4152		4.4529		
	06597484	4.4140		4.4425	4.4430 <sup>AT</sup>	
	06597485	4.4080		4.4654	62 Feb 10/17/02	smudge like dried wet spots
	06597486	4.3839		4.3995		
	06597487	4.4050		4.4266		
	06597488	4.4444		4.4624		Large tear in the middle
	06597489	4.4134	4.4133	4.46232	Feb 10/17/02	
	06597490	4.3813		4.4362		
	06597491	4.4264		4.4412		
	06597492	4.4290		4.4850		Scratch on one side
	0659496	4.4216				



PM-10 ☒ AIRS ☐  
 TSP ☐ SITE CHS # 30122 Q657471  
 AVG. RECORDER RESP. 20.73 TEMP      °C      K FINAL WT      g  
 ELAPSED TIME 1440 MINUTES PRESS      mmHg INITIAL WT      g  
 FLOW      m<sup>3</sup>/min TOTAL FLOW      m<sup>3</sup> SAMPLE WT      g  
 STD      ACTUAL      PM-10      ug/m<sup>3</sup>  
 COMMENTS:       
      
    

OPERATOR CEPA DATE 8-30-02

US EPA Region 5 Field Sample



5-340290-1

Parameters PM10

AR 0209016

S M M D B D

Preservative None

Sample ID 02AH66DO1

Sampler Mike Murphy

Date 8-30-02



PM-10 ☒ AIRS ☒  
 TSP \_\_\_\_\_ SITE CHS # 30183 Q6579494  
 AVG. RECORDER RESP. 20.79 TEMP \_\_\_\_\_ °C \_\_\_\_\_ K FINAL WT \_\_\_\_\_ g  
 ELAPSED TIME 1440 MINUTES PRESS \_\_\_\_\_ mmHg INITIAL WT \_\_\_\_\_ g  
 FLOW \_\_\_\_\_ m<sup>3</sup>/min TOTAL FLOW \_\_\_\_\_ m<sup>3</sup> SAMPLE WT \_\_\_\_\_ g  
 STD \_\_\_\_\_ ACTUAL \_\_\_\_\_ PM-10 \_\_\_\_\_ ug/m<sup>3</sup>  
 COMMENTS: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

US EPA Region 5 Field Sample



5-340289-1

Parameters PM10

*AIR 0209016*

Preservative None S M MD B D  
 Sample ID 02AH66SO1 X  
 Sampler Mike Murphy  
 Date 8-30-02





